

$\eta_b(2S)$

$$I^G(J^{PC}) = 0^+(0^-+)$$

OMITTED FROM SUMMARY TABLE

Quantum numbers shown are quark-model predictions.

$\eta_b(2S)$ MASS				
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
9999.0±3.5^{+2.8}_{-1.9}	26k	1 MIZUK	12 BELL	$e^+ e^- \rightarrow \gamma\pi^+\pi^- +$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •				
9974.6±2.3±2.1	11 ± 4	2,3 DOBBS	12	$\gamma(2S) \rightarrow \gamma$ hadrons
1 Assuming $\Gamma_{\eta_b}(2S) = 4.9$ MeV. Not independent of the corresponding mass difference measurement.				NODE=M200M;LINKAGE=MI
2 Obtained by analyzing CLEO III data but not authored by the CLEO Collaboration.				NODE=M200M;LINKAGE=DO
3 Assuming $\Gamma_{\eta_b}(2S) = 5$ MeV. Not independent of the corresponding mass difference measurement.				NODE=M200M;LINKAGE=NI

$m_{\gamma(2S)} - m_{\eta_b(2S)}$				
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
24.3±3.5^{+2.8}_{-1.9}	26k	4 MIZUK	12 BELL	$e^+ e^- \rightarrow \gamma\pi^+\pi^- +$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •				
48.7±2.3±2.1	11 ± 4	5,6 DOBBS	12	$\gamma(2S) \rightarrow \gamma$ hadrons
4 Assuming $\Gamma_{\eta_b}(2S) = 4.9$ MeV. Not independent of the corresponding mass measurement.				NODE=M200DM;LINKAGE=MI
5 Obtained by analyzing CLEO III data but not authored by the CLEO Collaboration.				NODE=M200DM;LINKAGE=DO
6 Assuming $\Gamma_{\eta_b}(2S) = 5$ MeV. Not independent of the corresponding mass measurement.				NODE=M200DM;LINKAGE=NI

$\eta_b(2S)$ WIDTH				
VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
<24	90	MIZUK	12 BELL	$e^+ e^- \rightarrow \gamma\pi^+\pi^-$ hadrons

$\eta_b(2S)$ DECAY MODES				
Mode	Fraction (Γ_i/Γ)			
Γ_1 hadrons	seen			

$\eta_b(2S)$ BRANCHING RATIOS			
$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$		Γ_1/Γ	
VALUE	EVTS	DOCUMENT ID	TECN
seen	26k	MIZUK	12 BELL
• • • We do not use the following data for averages, fits, limits, etc. • • •			$e^+ e^- \rightarrow \gamma\pi^+\pi^-$ hadrons
seen	7 DOBBS	12	$\gamma(2S) \rightarrow \gamma$ hadrons
7 Obtained by analyzing CLEO III data but not authored by the CLEO Collaboration.			

$\eta_b(2S)$ REFERENCES				
DOBBS	12	PRL 109 082001	S. Dobbs <i>et al.</i>	
MIZUK	12	PRL 109 232002	R. Mizuk <i>et al.</i>	(BELLE Collab.)

NODE=M200

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NODE=M200M

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NODE=M200M;LINKAGE=MI

NODE=M200M;LINKAGE=DO

NODE=M200M;LINKAGE=NI

NODE=M200DM

NODE=M200DM

NODE=M200DM;LINKAGE=MI

NODE=M200DM;LINKAGE=DO

NODE=M200DM;LINKAGE=NI

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NODE=M200215;NODE=M200

DESIG=1

NODE=M200225

NODE=M200R01

NODE=M200R01

NODE=M200R01;LINKAGE=DO

NODE=M200

REFID=54288

REFID=54718